Lesson plan

Discipline : DMLT

Semester : 2nd

Subject : Applied Haematology

Lession Plan Duration: 15 weeks(from 15-01-2026 to 30-04-2026) Work load (Lecture / practical) per week (in hours) = Lecture=3, Practical=6

WORK	THEORY		Practical	
	Lecture Day	Topic (Including assignment/test}	Practical Day	Topic
1st	1	Introduction to Haemoglobinometry	G1 & G2	L1 : Preparation of peripheral blood film L2 : Preparation of Leishman stain L3 : Preparation of Giemsa stain
	2	Formation of Haemoglobin		
	3	Function of Hb		
2nd	4	Degradation of Hb	G1 & G2	L4 : Preparation of thin smear L5 : : Preparation of thick smear L6 : Hb Estimation by Sahli's method
	5	Types of Hb		
	6	Complexes of Hb		
3rd	7	Principles & procedure of Hb estimation by Sahli's Method	G1 & G2	L7 : Hb Estimation by Oxy-haemoglobin method L8 : Hb Estimation by cyanmethaemoglobin method L9 :Counting of RBC by cell counter
	8	Specific reference & clinical significance Sahli's Method		
	9	Principles & procedure of Hb estimation by cyanmethaemoglobin Method		
4th	10	Specific reference & clinical significance of cyanmethaemoglobin method	G1 & G2	Revision
	11	**Sessional-1**		
	12	**Assignment-1**		
5th	13	Introduction to Haemocytometry	G1 & G2	Lab Test
	14	Introduction to Neubauer Chamber		
	15	Introduction to Rosenthal counting Chamber		
6th	16	Introduction to Buerker counting Chamber	G1 & G2	L10 : Counting of WBC by cell counter L11 : Counting of Platelets
	17	Principles & procedure of		

		RBC Counting		by cell counter L12 : Counting of RBC by Neubauer hamber
	18	Calculations, Reference values of RBC		
7th	19	Principles & procedure of WBC counting	G1 & G2	L13 : Counting of WBC by neubauer chamber L14 : Counting of Platelets by neubauer chamber L15 : Absolute eosinophil Counting
	20	Calculations, Reference values of WBC counting		
	21	Principles & procedure of Platelets counting		
8th	22	Calculations, Reference values of Platelets counting	G1 & G2	L16 : Study the morphology of normal RBC by Leishman stain L17 : Study the morphology of normal WBC by Leishman stain L18 : Study the morphology of normal RBC by Giemsa stain
	23	Errors involved in the Haemocytometry		
	24	process to minimize errors involved in Haemocytometry		
9th	25	Clinical significance of RBC, WBC, Platelets counting	G1 & G2	Revision
	26	**Sessional-2**		
	27	**Assignment-2**		
10th	28	Introduction to differential Leucocytes	G1 & G2	Lab Test
	29	Preparation of thin & thick film		
	30	Staining of blood film by Leishman stain		
11th	31	Staining of blood film by Giemsa stain	G1 & G2	L19 : Study the morphology of normal WBC by Giemsa stain L20 : Study the morphology of abnormal RBC by Leishman stain L21 : Study the morphology of abnormal RBC by Giemsa stain
	32	Staining of blood film by Field stain		
	33	Calculation & performance of DLC		
12th	34	Normal Values & significance of DLC counting	G1 & G2	L22 : Study the morphology of abnormal WBC by Leishman stain L23 : Study the morphology of abnormal WBC by Giemsa stain L24 : Study the morphology of normal Platelets by Leishman stain
	35	**Sessional-3**		
	36	**Assignment-3**		

13th	37	Study the morphology of normal RBC&WBC	G1 & G2	L25 : Study the morphology of normal Platelets by Giemsa stain L26 : Study the morphology of normal RBC by Field stain L27 : Study the morphology of normal WBC by Field stain
	38	Study the morphology of abnormal RBC&WBC		
	39	Study the morphology of normal & abnormal Platelets		
14th	40	Introduction to Quality Assurance in Haematology	G1 & G2	L28 : Study the morphology of normal Platelets by Field stain L29 : Study the morphology of abnormal RBC by Field stain L30 : Study the morphology of abnormal WBC by Field stain
	41	Accuracy & precision in Quality Assurance		
	42	Various types of blood cell counters		
15th	43	Principle & operations of automated blood cell counter	G1 & G2	Revision
	44	Principle & operation of coulter counter		
	45	Assignment of unit 5th& 6th		

Lesson plan

Discipline : DMLT
Semester : 2nd
Subject : Bacteriology
Lession Plan Duration : 15 weeks(from 15-01-2026 to 30-04-2026)
Workload(Lecture /practical)per week (in hours) = Lecture= 03, Practical=04

Week	Theory		Practical	
	Lecture day	Topics(inculdingassignment/test)	Practical Day	Topic
1	1	Introduction to Bacteriology and morphology	1	Collection of blood by capillary method.
	2	Staining techniques and biochemical test		
	3	Morphology, cc,BT,pathogenicity, Lab diagnosis of Staphylocci		
2	4	Morphology, cc,BT,pathogenicity, Lab diagnosis of streptococci	2	Collection of blood by vein puncture method
	5	Morphology, cc,BT,pathogenicity, Lab diagnosis of pneumococci		
	6	Morphology, cc,BT,pathogenicity, Lab diagnosis of E.coli		
3	7	Morphology, cc,BT,pathogenicity, Lab diagnosis of Salmoneela	3	Collection of STOOL
	8	Morphology, cc,BT,pathogenicity, Lab diagnosis of Shigella		
	9	Revision of staphylocci, streptococci, pneumococci		
4	10	Revision of E.coli, Salmonella, Shigella	4	Collection of URINE
	11	Introduction of pathogens,pathogenicity, infection		
	12	Sources of infection		
5	13	Mode of infection and types of infection	5	Collection of SPUTUM
	14	Assignment1		
	15	Test		
6	16	Morphology, cc,BT,pathogenicity, Lab diagnosis of pseudomonas	6	Collection of THROAT SWABS
	17	Morphology, cc,BT,pathogenicity, Lab diagnosis of proteus		
	18	Morphology, cc,BT,pathogenicity, Lab diagnosis of vibrio cholarea		
7	19	Morphology, cc,BT,pathogenicity, Lab diagnosis of neissria	7	Collection of SKIN
	20	Morphology, cc,BT,pathogenicity, Lab diagnosis of T.pallidium		
	21	Morphology, cc,BT,pathogenicity, Lab diagnosis of Myco bacterium TB and Laprae		
8	22	Introduction to nosocomial ifcetion	8	Collection of CSF
	23	Common types of HAI and sources of HAI		
	24	Prevention of HAI		
9	25	Revision of unit 2nd	9	Collection of PUS AND PUS SWABS.
	26	Revision of 4th unit		
	27	Assignment 2		

10	28	Test	10	Collection of EYE & EAR SWABS
	29	Laboratory of Infectious diseases of septicemia		
	30	Laboratory of Infectious diseases of bacteraemia		
11	31	Laboratory of Infectious diseases of RTI	11	Test 1
	32	Laboratory of Infectious diseases of wound infection		
	33	Laboratory of Infectious diseases of UTI		
12	34	Laboratory of Infectious diseases of Enteric fever	12	Preparation of CM and identify the pathogens
	35	Laboratory of Infectious diseases of Intestinal infection		
	36	Laboratory of Infectious diseases of Meningtisis		
13	37	Revision of Septicemia, RTI	13	Preparation of CM and identify the pathogens
	38	Revision of wound infection		
	39	Revision of UTI		
14	40	Revision of Typhoid fever, Meningtisis	14	Preparation of CM and identify the pathogens
	41	Revision of Intestinal infection		
	42	Assignment 3/Test		
15	43	Revision of 1^{st} &2^{nd} Unit	15	TEST 2
	44	Revision of 3^{rd} & 4^{th} Unit		
	45	Revision of 5^{th} unit		

Discipline : MLT

Semester : 2nd Sem

Subject : BIOCHEMISTRY-II

Lesson Plan Duration : from 15.01.2026 to 30.04.2026

Work Load (Lecture/Practical) per week (in hours): 03 (Th) + 04(Pr)

Week	Theory		Practical	
	Lecture Day	**Topic (Including assignment / test)**	**Practical Day**	**Topic**
1st	1	Introduction to biochemistry	**1**	Handling and maintenance of 1. Balance 2.centrifuge
	2	Definition and importance of biochemistry		
	3	Volumetric apparatus their calibration		
2nd	4	Volumetric apparatus calibration	**2**	Handling and maintenance of 1. Colorimeter 2.Ion selective electrode
	5	Introduction about Blood and its fraction		
	6	Separation of Serum/Plasma		
3rd	7	Different Protein Precipitating reagents	**3**	Handling and maintenance of 1. Glucometer 2. Deionizer
	8	Preparation of protein free filtrate (PFF)		
	9	Collection and preservation of Blood		
4th	10	Revision of 1st unit	**4**	1. Practical revision 2. Practical test
	11	Collection and preservation of Urine		
	12	Collection and preservation of blood		
5th	13	Collection and preservation of Stool and other body fluids	**5**	Collection of blood by 1. Capillary puncture 2. Vein puncture include vacutainer system
	14	Collection and preservation of other body fluids		
	15	Assignment 1st		
6th	16	Sessional test 1st	**6**	1. Separation of Serum 2. Separation of Plasma
	17	Introduction to Blood glucose/sugar		
	18	Glucose Screening test		
7th	19	Glucose tolerance test introduction	**7**	1. Preparation of Protein Free Filtrate (PFF)
	20	Metabolism of Glucose		

	21	Principle of Glucose estimation		2. Preparation of reagents (stock and working)
8th	22	Method of estimation	**8**	1. Practical revision 2. Practical test
	23	Ref. Value and Renal threshold		
	24	Introduction and performance of GTT		
9th	25	Clinical importance of blood sugar	**9**	1. Estimation of Blood glucose by o-toludine method 2. Practical viva
	26	Revision of 3rd unit		
	27	Introduction to Blood urea		
10th	28	Formation and excretion of urea	**10**	1. Perform Glucose tolerance test using GOD-POD method 2. Urea estimatio
	29	Principle and Procedure of urea estimation		
	30	Ref. Value and Clinical Importance		
11th	31	Revision 4th unit	**11**	1. Creatinine estimation 2. Uric acid estimation
	32	Assignment 2nd		
	33	Sessional test 2nd		
12th	34	Serum Proteins Introduction	**12**	1. Plasma protein estimation 2. Serum protein estimation
	35	Procedure of Proteins estimation		
	36	Procedure of serum protein estimation		
13th	37	Ref. Value & Clinical Importance	**13**	1. Practical revision
	38	Revision		
	39	Introduction to uricacid		
14th	40	Principle and Procedure of uric and estimation	**14**	1. Practical viva
	41	Ref. Value & Clinical Imp		
	42	Revision 5th unit		
15th	43	Sessional test 3rd	**15**	Revision
	44	Revision of all syllabus		
	45	Revision by Previous year question papers		

Lesson plan

Discipline : MLT

Semester : 2nd

Subject : ESDM

Lesson Plan Duration : from 15.01.20256 to 30.04.2026

Work Load (Lecture/Practical) per week (in hours): Lecture - 02

week	Theory	
	Lecture day	**Topic (including assignment /test)**
1	1	Basics of ecology, ecosystem- concept
	2	Rain water harvesting and deforestation – its effects and control measures
2	3	sustainable development, sources,
	4	advantages, disadvantages of renewable and non-renewable energy.
3	5	Air Pollution: source of air pollution. Effect of air pollution health,
	6	economy, air pollution control methods
4	7	Noise pollution: source of noise pollution, unit of noise, effect of noise pollution,
	8	acceptable noise level, different method of minizing noise pollution.
5	9	Revision
	10	Sessional Test 1
6	11	Water Pollution: Impurities in water, Cause of water pollution, Source of water pollution
	12	Effect of water pollution on human health, Concept of DO, BOD, COD. Prevention of water pollution- Water treatment processes, Sewage treatment. Water quality standard.
7	13	Soil Pollution :Sources of soil pollution, Effects and Control of soil pollution
	14	Types of Solid waste- House hold, Industrial, Agricultural, Biomedical, Disposal of solid waste, Solid waste management E-waste, E-waste management
8	15	Global Warming, Green House Effect, Depletion of Ozone Layer, Acid Rain.
	16	Eco-friendly Material, Recycling of Material, Concept of Green Buildings.
9	17	Concept of Carbon Credit & Carbon footprint.
	18	**Revision**
10	19	**Test**
	20	A. Different Types of Disaster: Natural Disaster: such as Flood, Cyclone, Earthquakes and Landslides etc
11	21	Man-made Disaster: such as Fire, Industrial Pollution, Nuclear Disaster, Biological Disasters,

	22	Accidents (Air, Sea Rail & Road), Structural failures(Building and Bridge)
12	23	War & Terrorism
	24	B. Disaster Preparedness:
13	25	Disaster Preparedness Plan
	26	Prediction, Early Warnings and Safety Measures of Disaster
14	27	Psychological response and Management (Trauma, Stress, Rumour and Panic)
	28	**Revision**
15	29	**Test**
	30	**Previous Question Paper Solve**

Lesson plan

Discipline : MLT
Semester : 2nd
Subject : AP (Anatomy Physiology)
Lesson Plan Duration : from 15.01.2026 to 30.04.2026
Work Load (Lecture/Practical) per week (in hours): Lecture - 3 , Practical - 4

week	Theory		Practical	
	Lecture day		Practical day	Topics
1	1	Introduction to CNS, Brain and its parts	1	Study of various parts of brain
	2	Brain and its parts		
	3	Introduction to Spinal cord and its parts		
2	4	Cranial nerves	2	Study of various parts of spinal cord
	5	Spinal nerves		
	6	Structure and function of eye		
3	7	Structure and function of ear	3	Demonstration of eye structure
	8	Structure and function of tongue and nose		
	9	**Revision**		
4	10	**Test**	4	Demonstration of ear structure
	11	Introduction of Circulatory system		
	12	Composition and functions of blood		
5	13	Anatomy and Physiology of Heart	5	Demonstration of structure of skeletal muscle
	14	Circulation of blood		
	15	Cardiac Cycle		
6	16	Conducting system of heart	6	Demonstration of structure of smooth muscle
	17	The blood Pressure		
	18	Arteries		
7	19	Veins	7	Demonstration of structure of cardiac muscle
	20	Lymph and lymphatic System		
	21	**Revision**		
8	22	**Test**	8	Demonstration of structure of heart
	23	Introduction to Endocrine System		
	24	Description of each endocrine gland		

9	25	Endocrine gland its secretions	9	Examination of stained blood film for blood cells
	26	Endocrine gland their effect on the body		
	27	**Revision**		
10	28	**Test**	10	Estimation of blood pressure
	29	Introduction to Excretory system		
	30	Organs of excretion kidneys		
11	31	Organs of excretion ureter	11	Demonstration of Radial pulse examination
	32	Organs of excretion bladder		
	33	Formation of urine		
12	34	Urine composition	12	Demonstration of male reproductive system
	35	Structure of nephron		
	36	**Revision**		
13	37	**Test**	13	Demonstration of female reproductive system
	38	Introduction to Reproductive System		
	39	Reproductive System: Male		
14	40	Reproductive System: Female	14	Demonstration of excretory system
	41	The ovarian cycle ,		
	42	Ovulation		
15	43	**Revision**	15	Structure of Kidney
	44	**Test**		
	45	Previous Question Paper solve		